

## **DETAILED ACTION**

### ***Summary***

1. Claims 1, 2, 5, 7, and 8 have been canceled. Claims 3, 4, and 6 are allowed. This is a notice of allowance. Examiner acknowledges telephone interview given January 29, 2010 at 9:13 A.M. and detailed in the attached interview summary.

### **EXAMINER'S AMENDMENT**

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with attorney of record Michael Jaffe on 1/29/2010 at 9:13 A.M. Claim 3 is hereby amended as detailed in attached interview summary (Paper number 20100127)

3. The application has been amended as follows:

3. (currently amended) A non-contact power supply system comprising:  
a moving body:  
a plurality of induction lines arranged sequentially along a moving path of the moving body and adjusted to an equal impedance at a predetermined frequency; and  
a plurality of power supply units respectively transforming direct current to alternating current of the predetermined frequency by means of a plurality of switching

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devices each driven by a rectangular wave signal, and feeding the transformed current as output current to the induction lines,

the moving body including a pickup coil facing the induction lines, the moving body having a load varying in power consumption, the load being fed with power from electromotive force induced to the pickup coil, wherein

the power supply units each includes a measuring unit for measuring power consumption and output current fed to the induction lines and a calculation unit for determining a phase difference between the output current fed to the induction lines and the rectangular wave signal based on the output current and power consumption measured by the measuring unit,

a specific one of the power supply units and the other power supply units are connected in series via signal transmission lines,

the specific power supply unit includes

a reference pulse generator circuit for outputting a synchronization signal as thea command signal of the predetermined frequency to drive the switching devices;

a phase adjustment circuit for compensating for a delay of the synchronization signal outputted from the reference pulse generator circuit and transmitting the signal to the power supply unit connected downstream, the delay being caused by a line length of the signal transmission line between the specific power supply and the power supply unit connected downstream; and

a phase difference detection circuit for detecting a phase difference between the synchronization signal transmitted from the phase adjustment circuit and a return synchronization signal fed back from the downstream power supply unit to which the synchronization signal has been transmitted,

the specific power supply unit advances or delays the rectangular wave signal in response to the synchronization signal outputted from the reference pulse generator circuit according to the phase difference determined by the calculation unit, thereby to drive the switching devices,

the phase adjustment circuit corrects a phase of the synchronization signal, which has been outputted from the reference pulse generator circuit, according to the phase difference detected by the phase difference detection circuit, and transmits the signal to the downstream power supply unit,

~~each of the other power supply units advances or delays the rectangular wave signal in response to a synchronization signal having been received from the power supply unit connected upstream according to the phase difference determined by the calculation unit, thereby to drive the switching devices,~~

each of the other power supply units includes

a phase adjustment circuit for compensating for a delay of the synchronization signal having been received from the upstream power supply unit and transmitting the signal to the power supply unit connected downstream, if applicable, the delay being caused by a line length of the

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signal transmission line between the power supply unit and the power supply unit connected downstream; and

a phase difference detection circuit for detecting a phase difference between the synchronization signal transmitted from the phase adjustment circuit and a return synchronization signal fed back from the downstream power supply unit, if applicable, to which the synchronization signal has been transmitted, and

each of the phase adjustment circuits of the other power supply units corrects a phase of the synchronization signal having been received from the upstream power supply unit according to the phase difference detected by the phase difference detection circuit, and transmits the signal to the downstream power supply unit, if applicable; and

each of the other power supply units advances or delays the rectangular wave signal in response to the synchronization signal having been received from the power supply unit connected upstream according to the phase difference determined by the calculation unit, thereby to drive the switching devices, wherein

each of the other power supply units has a downstream power supply unit except the last power supply unit in the series connection.

***Allowable Subject Matter***

4. Claims 3, 4, and 6 are allowed.
5. The following is an examiner's statement of reasons for allowance:

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- a. **Regarding claim 3**, the prior art (Nishino et al, US 5,709,291; Hayashi et al, US 2002/0024828; Ferens, 5,757,634; Kazutoshi, 7,009,860) disclose the non-contact power supply system as described above but fail to disclose the specific power supply and each of the other power supplies includes a phase adjustment circuit and a phase difference detection circuit as described.
- b. **Regarding claims 4 and 6**, these claims are dependant on claim 3, and are therefore allowable for the same reasons as independent claim 3.
- c. Furthermore, none of the other prior art of record, taken alone or in combination, teaches or suggests these claim features.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MANUEL HERNANDEZ whose telephone number is (571)270-7916. The examiner can normally be reached on 8:30 A.M - 5:00 P.M. Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Assouad can be reached on 571-272-2210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/M.H./  
2/16/10

/Jay M. Patidar/

Primary Examiner, Art Unit 2858